



Proposed Light Pollution Code and Zoning Regulation Updates

Board of Supervisors
September 9, 2014



Introduction

➤ New Technology in Signs and Light Bulbs

➤ Light Bulbs: Standard incandescent bulbs cannot be manufactured – Federal Law phased in over past few years.

➤ Replaced with Compact Florescent and Light Emitting Diodes (LEDs). The new technology is less expensive than the effort to make incandescent more efficient.



Incandescent Bulb



LED Bulb



LED Diode



Compact
Fluorescent



Digital Signs

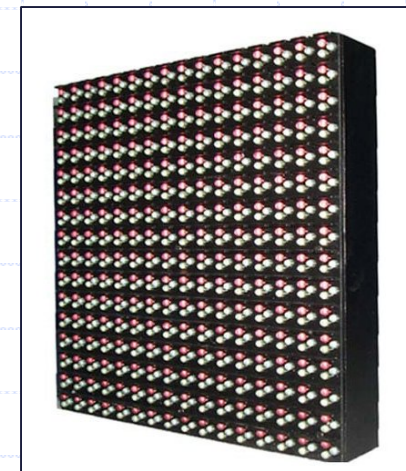
- Current Digital Sign technology: LED, LCD, plasma displays, and projected images to display content – all are more energy efficient allowing brighter signs.



Billboards



Ground Signs



LED Diodes

LED diodes project light at a 180° angle and cannot be shielded.



Light Pollution Code

- ◆ Sets Lumen Counts for both Shielded and Unshielded lights.
- ◆ However, there is NO reference to Digital Signs or to new technology.
- ◆ Light Trespass measurements are no longer feasible – 180° above five-foot will not register on lumen meters.
- ◆ New Technology will bring more challenges.



Staff Approach

- ◆ Working Group was formed, three meetings with Staff.
- ◆ Held a Public Meeting to discuss the LPC Review. Overwhelming consensus to ban digital signs
 - Questionnaire was handed out
 - ◆ Staff asked “Regarding Digital Signs in Cochise County, do you support:
 - A complete ban on digital signs?
 - Review and approval by County Staff?
 - Review and approval by the Planning and Zoning Commission at a Public Hearing?
 - No Regulations limiting digital signs?
 - Another Option? (Please explain below)



Questionnaire

- ◆ Volunteer took this questionnaire out to the public:
 - ◆ 64 were returned
 - 52 support a complete ban
 - 1 support a staff review
 - 7 support the Special Use Process
 - 1 support not regulating digital signs
 - 6 suggested other considerations including:
 - Restrict size, brightness, color, and timing (turn off at night) but not complete ban.
 - Use of a monitoring system to regulate signs including night dimmers.
 - Ensure proper shielding.
 - Place a tax on these digital signs.

Light Output/Lumens

Measures light output. The higher the number, the more light is emitted.

Reported as "Total Integrated Flux (Lumens)" on LM-79 test report.

Watts

Measures energy required to light the product. The lower the wattage, the less energy used.

Reported as "Input Power (Watts)" on LM-79 report.

Lumens per Watt/Efficacy

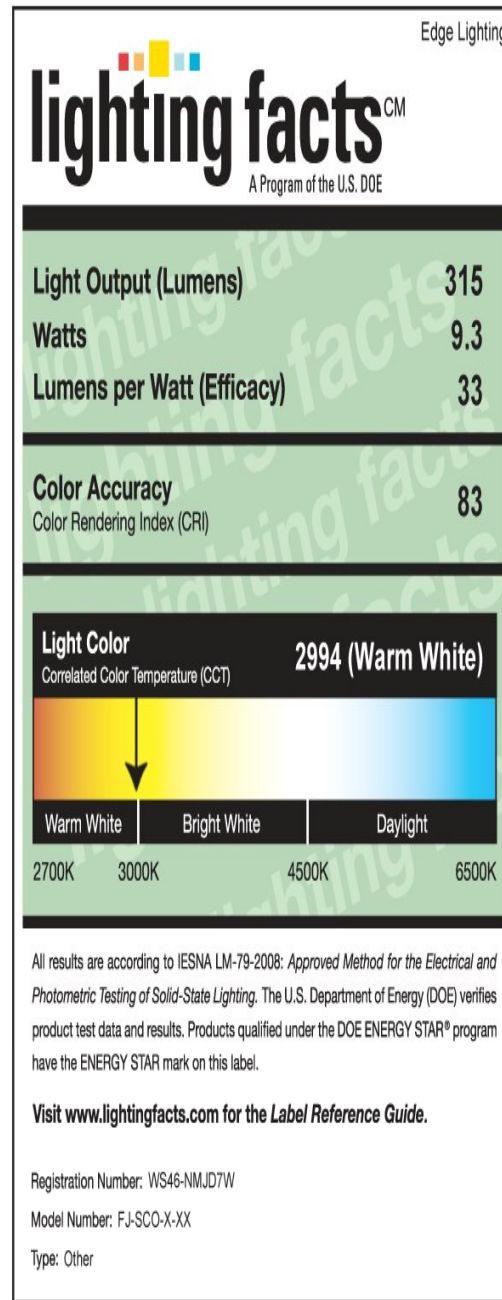
Measures efficiency. The higher the number, the more efficient the product.

Reported as "Efficacy" on LM-79 test report.

IESNA LM-79-2008

Industry standardized test procedure that measures performance qualities of LED luminaires and integral lamps. It allows for a true comparison of luminaires regardless of the light source.

Brand & Model Number



Color Rendering Index (CRI)

Measures color accuracy.

Color rendition is the effect of the lamp's light spectrum on the color appearance of objects.

Correlated Color Temperature (CCT)

Measures light color.

"Cool" colors have higher Kelvin temperatures (3600–5500K); "Warm" colors have lower color temperatures (2700–3500K).



Survey Monkey

Regarding digital signs in unincorporated Cochise County, I support:

Answer Options	Response (Percent)	Response (Count)
A complete ban on digital signs.	43.5%	597
Review and approval through County Staff.	14.9%	205
Review and approval by the Planning and Zoning Commission at a Public Hearing.	33.1%	454
No regulations limiting digital signs.	8.5%	117
Other (please specify)	248	248
answered question	1373	1373
skipped question	35	35



The Bottom Line

- ◆ The question is how do we -
 - Preserve Dark Skies;
 - Respect Rural Character; yet
 - Still be Business Friendly?



Staff Recommendations

- ◆ Minor changes to our existing Light Pollution Code:
 - Definitions: Add: "Digital signs: A type of electronic display that shows programming, menus, information, advertising, and other messages. Digital signs are lighted, typically animated, flashing and utilize technologies such as LCD, LED, plasma displays, or projected images to display content, and cannot be shielded."
 - Section 6 Signage. Add: C. Digital Signs: "Digital signs that meet the standards as listed in Section 1907.02B of the Cochise County Zoning Regulations are permitted. Digital Signs shall be considered Unshielded and restricted to total lumen cap per Table 4.1 of this Code."
 - Incorporate the Code directly into the Zoning Regulations as Article 16.



Staff Recommendations

- ◆ Amend Zoning Regulations, Article 19 – Signs, add special restrictions for Digital Signs to address existing and emerging technology:

- ◆ “Digital Signs: Permitted Structural Type: Ground Sign

Illumination: Permitted, but only from sunrise to sunset, except for fuel price, motel price, time and temperature signs, and similar signs, which can be illuminated at any time, provided

- i) the lumens emitted by the sign, together with any other unshielded lighting on the site, do not exceed the maximum allowed in Table 4.1 of the County Light Pollution Code for unshielded lighting;
- ii) the lighted text on the sign is red or green on a black background; and,
- iii) Comply with all other provisions of the Light Pollution Code and County Zoning Regulations.

Maximum Height: five-feet above grade